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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,731	07/03/2003	Gerald A. Hutchinson	APTLTD.048A	7527

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EXAMINER	
TSOY, ELENA	
ART UNIT	PAPER NUMBER
1792	

NOTIFICATION DATE	DELIVERY MODE
04/01/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/614,731	HUTCHINSON ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,16-19,52,53,57-63 and 65-95* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,16-19,52,53,57-63 and 65-95* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

Amendment filed on February 8, 2008 has been entered. Claims 1-14, 16-19, 52, 53, 57-63, and 65-95 are pending in the application.

Claim Objections

1. Claims 10-11 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 10 and 11 recite the source being infrared and forced air. However, claim **1**, on which claims 10-11 depend, does not recite forced air. Note that irradiation source may include only ray emitting sources not forced air.

2. Objection to claim 80 because of the informalities has been withdrawn due to amendment.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Rejection of claims 1-14, 16-19, 58-63, and 65-72 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn due to amendment.

5. Rejection of claims 1-14, 16-19, 58-63, and 65-72 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn due to amendment.

6. Rejection of claims 52-53, and 57 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn due to amendment.

7. Rejection of claims 1-14, 16-19, 58-63, and 65-72 under 35 U.S.C. 112, first paragraph , because the specification, while being enabling for producing coated 24 gram preforms having

0.05 to about 0.75 total grams of coating material deposited thereon (See published application, P131), does not reasonably provide enablement for 0.05 to about 0.75 total grams of coating material deposited on article of any size, has been withdrawn due to amendment.

8. Rejection of claims 1-14, 16-19, 58-63, and 65-72 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for curing/drying for 5-60 seconds with an irradiation source of 0.05 to about 0. 75 ***total*** grams of coating material of the coated 24 gram preform (See published application, P164), does not reasonably provide enablement for curing/drying for 5-60 seconds with an irradiation source of 0.05 to about 0.75 grams of one layer of coating material deposited on article of ***any*** size, has been withdrawn due to amendment.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Rejection of claims 1-14, 16-19, 58-63, and 65-72 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn due to amendment.

11. Rejection of claims 52-53, and 57 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn due to amendment.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-9, 12, 14, 16-18, 52, 53, 57-60, 62, 63 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 31-38 of U.S. Patent No. 6,676,883 in view of Dworak et al (US 6,350,796), further in view of Geist et al (US 4762903).

Dworak et al fails to teach that a phosphoric acid is also suitable for neutralization of amino epoxy resins, as required by amended Claims 1, 52.

Geist et al teach that water-dilutability of amino epoxy resins binders (See column 5, lines 4-30) may be achieved by neutralization of the amino groups with water-soluble acids (for example *formic acid, acetic acid* or **phosphoric acid**) (See column 5, lines 31-34).
It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used phosphoric acid in Dworak et al/the cited prior art with the expectation of providing the desired water-dilutability of amino epoxy resins since Geist et al teach that water-dilutability of amino epoxy resins binders may be achieved by neutralization of the amino groups with water-soluble acids such *formic acid, acetic acid* or phosphoric acid, and Dworak et al does not limit its teaching to organic acids.

5. Claims 68-71, 74, 75, and 77 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 31-38 of U.S. Patent No. 6,676,883 in view of Dworak et al, further in view of Geist et al, and further in view of Mallya et al (US 6489387) for the reasons of record set forth in paragraph 14 of the Office Action mailed on 8/8/2007.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-12, 14, 16-19, 52-53, 57-63, and 65-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi (US 4,393,106) in view of Farha (US 5,472,753), further in view of Noda (US 6,872,802), further in view of Dworak et al, and further in view of Geist et al (US 4762903).

The cited prior art is applied here for the same reasons as set forth in paragraph 16 of the Office Action mailed on 8/8/2007. As was discussed in the previous Office Action, Dworak et al teaches that amino epoxy resins that are insoluble or have very low solubility in water, especially those based on bisphenol A, which are commonly used commercially, can be formulated as dispersions or *solutions* in water by neutralizing some or all of the basic groups of the resins with an aqueous acid, **preferably** an organic acid such as *formic acid, acetic acid* or lactic acid (See column 1, lines 41-47). The degree of neutralization of said groups (i.e., the fraction of ionic groups) are critical for the extent of dilutability in water (See column 1, lines 47-48).

Dworak et al fails to teach that a phosphoric acid is also suitable for neutralization of amino epoxy resins (Claims 1, 52).

Geist et al teach that water-dilutability of amino epoxy resins binders (See column 5, lines 4-30) may be achieved by neutralization of the amino groups with water-soluble acids (for example *formic acid, acetic acid* or **phosphoric acid)** (See column 5, lines 31-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used phosphoric acid in Dworak et al/the cited prior art with the expectation of providing the desired water-dilutability of amino epoxy resins since Geist et al teach that water-dilutability of amino epoxy resins binders may be achieved by neutralization of the amino groups with water-soluble acids such *formic acid, acetic acid* or phosphoric acid, and Dworak et al does not limit its teaching to organic acids.

8. Claims 1-12, 14, 16-19, 52-53, 57-63, and 65-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi (US 4,393,106) in view of Farha (US 5,472,753), further in view of Noda (US 6,872,802), and further in view of Geist et al.

The cited prior art is applied here for the same reasons as set forth in paragraph 16 of the Office Action mailed on 8/8/2007. The cited prior art fails to teach that a dispersion or solution of the thermoplastic epoxy resin comprises acid salts made from the reaction of polyhydroxyaminoethers with phosphoric acid (Claim 1, 52).

Geist et al teach that water-dilutability of amino epoxy resin binders (See column 5, lines 4-30) may be achieved by neutralization of the amino groups with water-soluble acids (for example formic acid, acetic acid or *phosphoric acid*) (See column 5, lines 31-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed a dispersion or solution of the thermoplastic epoxy resin of the cited prior art by forming acid salts by reacting polyhydroxyaminoethers with phosphoric acid since Geist et al teach that water-dilutability of amino epoxy resin binders may be achieved by neutralization of amino groups with phosphoric acid.

9. Claims 8, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, further in view of Dworak et al, and further in view of Geist et al, and further in view of Cobbs, Jr et al (US 4,573,429) for the reasons of record set forth in paragraph 17 of the Office Action mailed on 8/8/2007.

10. Claims 8, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, and further in view of Geist et al, and further in view of Cobbs, Jr et al (US 4,573,429) for the reasons of record set forth in paragraph 17 of the Office Action mailed on 8/8/2007.

11. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, further in view of Dworak et al, and further in view of Geist et al, and further in view of Miyake et al (US 5079034) for the reasons of record set forth in paragraph 18 of the Office Action mailed on 8/8/2007.

12. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, and further in view of Geist et al, and further in view of Miyake et al (US 5079034) for the reasons of record set forth in paragraph 18 of the Office Action mailed on 8/8/2007.

13. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, further in view of Dworak et al and further in view

of Geist et al, and further in view of Kennedy (US 4,505,951) for the reasons of record set forth in paragraph 19 of the Office Action mailed on 8/8/2007.

14. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, further in view of Geist et al, and further in view of Kennedy (US 4,505,951) for the reasons of record set forth in paragraph 19 of the Office Action mailed on 8/8/2007.

15. Claims 80-88, 90-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, further in view of Dworak et al, and further in view of Geist et al, further in view of Kennedy, and further in view of Cobbs, Jr et al for the reasons of record set forth in paragraph 20 of the Office Action mailed on 8/8/2007.

16. Claims 80-88, 90-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, and further in view of Geist et al, further in view of Kennedy, and further in view of Cobbs, Jr et al for the reasons of record set forth in paragraph 20 of the Office Action mailed on 8/8/2007.

17. Claim 89 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, further in view of Dworak et al, and further in view of Geist et al, further in view of Kennedy, further in view of Cobbs, Jr et al, and further in view of Fagerburg et al (US 4499262) for the reasons of record set forth in paragraph 21 of the Office Action mailed on 8/8/2007.

18. Claim 89 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al in view of Farha, further in view of Noda, further in view of Geist et al, further in view of Kennedy, further in view of Cobbs, Jr et al, and further in view of Fagerburg et al (US 4499262) for the reasons of record set forth in paragraph 21 of the Office Action mailed on 8/8/2007.

Response to Arguments

19. Applicant's arguments with respect to claims 1-14, 16-19, 52, 53, 57-63, and 65-95 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Friday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy, Ph.D.
Primary Examiner
Art Unit 1792

March 28, 2008

/Elena Tsoy /

Primary Examiner, Art Unit 1792